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ABSTRACT

This study examined the manner in which people who differed in degree of stereotyping of women organized sets of gender-relevant information. The Gender Expectancies (GE) measure was used to assess degree of stereotyping. Cognitive organization was assessed in two ways. First, principal component factor analyses using a varimax rotation were done on the item likelihood ratio scores from the GE. Second, cluster analyses were performed on the Evaluation, Potency, and Activity scores derived from a semantic differential based on 15 scales. Subjects in the factor analytic study were 471 students from a university and a community college: 101 high stereotypy males, 101 low stereotypy males, 134 high stereotypy females, and 135 low stereotypy females. A subset of 32 males and 53 females participated in a cluster analytic study. The data strongly suggest that individual differences in stereotyping of women are not simply a matter of degree of endorsement of a particular perception of women as a group. There appear to be important differences in how information regarding gender of persons and roles is organized by persons high and low in degree of differentiation of women from the population. The findings suggest that individual differences in stereotyping can be understood as qualitative differences in the cognitive organization of information about the sexes as well as quantitative differences in attribution of a particular quality to women. (NB)

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Differences in Cognitive Structure as a Function of Level of Stereotyping of Women

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Running Head: COGNITIVE STRUCTURE IN STEREOTYPING

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Differences in Cognitive Structure as a Function of Level of Stereotyping of Women

Gender stereotypes are typically now conceptualized in cognitive terms. Ashmore and Del Boca (1979, p. 222) define gender stereotype as "the structured sets of beliefs about the personal attributes of women and men." In a similar vein McCauley and Stitt (1978) define stereotyping as a cognitive process of differentiating a target group from the population as a whole on the basis of traits which are seen as having a higher or lower probability of occurrence in the target population than in the population as a whole. Bem (1981) argues that sex typing reflects the organization of self and other concepts in terms of gender schemas.

If stereotyping is approached from a cognitive perspective, not only may different traits be attributed to target groups, such as agentic traits to males and communal traits to females, information may be organized in different ways by different people. These differences in organization may also be important in understanding the nature of a stereotype. For example, if the stereotype of "dog" includes the contents "vicious", "protective", "active", and "loyal" one's impression of "dog"--and one's behavior toward dogs--will be quite different if these four contents are organized horizontally such that each is thought of as equally likely in every dog, or both horizontally

and vertically such that "active", "loyal" constitute one level while "protective" is subordinate to "loyal" and "vicious" is subordinate to "protective". Polkinghorne (1983) argues that to understand any complex system, whether it be an organism, a family, or an organized set of meanings such as a stereotype, it is necessary to focus upon the relationships between the elements and not merely on the nature of the elements themselves, because in a true system the organization adds something to the whole that can never be derived from the properties of the elements in isolation.

Some information on the organization of gender stereotypes is available from factor analytic studies done on self-ratings of stereotypic traits. Feather (1978) in examining the factor structure of the Bem Sex Role Inventory (BSRI) concluded that masculinity and femininity are best understood as factorially complex rather than as either unipolar or bipolar in nature. Feather's conclusion is supported by other factor analytic studies (e.g. Bohannon & Mills, 1979; Kimlicka, Wakefield & Friedman, 1980; Waters, Waters & Pincus, 1977) which identified several factors in the BSRI that appear in different samples, these factors being an instrumental factor, an expressive factor, a factor which captures biological gender of the respondent, and a factor of independence or social maturity. Kimlicka et al. (1980) suggest further that the concept of masculinity is more factorially complex than that of femininity.

Other authors (Andersen & Klatzky 1987; Fiske, Neuberg, Beattie, & Milberg, 1987) have examined the question of structure of stereotypes by looking at the relations between stereotypes based on group (e.g. lawyers) and those based on traits (e.g. intelligent, devious). The data from these studies suggests that trait stereotypes are subordinate to group stereotypes. Work by Deaux and her colleagues (Deaux & Kite, 1985; Deaux & Lewis, 1984; Deaux, Winton, Crowley & Lewis, 1985) suggests that there are multiple gender stereotypes some of which may be subordinate to the group "females" and some of which may not.

Based on the information about the structure of gender stereotypes currently available, it would be logical to assume that individual differences in stereotyping of women (or men) could be captured by assessing where individuals place the concept on the common dimensions. However, if gender stereotypes are organized sets of beliefs (Ashmore & Del Boca, 1970) in which there are important individual differences that cannot be adequately assessed by degree of endorsement of a cultural view of a gender (McCauley & Stitt, 1978), then persons high and low in stereotypy may organize gender relevant information differently. Indeed, if high and low stereotypy people have truly differing views of the sexes, a systemic approach to understanding meaning (Polkinghorne, 1983) would suggest that differences in structure or organization should be found between high and low stereotypy individuals. However, differences in the structure of stereotypes as a function of the degree of stereotyping has not

been examined. The present study examined the manner in which people who differed in degree of stereotyping of women organized sets of gender relevant information.

Method

Measurement of Stereotyping

The Gender Expectancies (GE) measure (Richert & Hoyenga, 1982; Richert and Hoyenga, 1986) which is based on McCauley and Stitt's (1978) likelihood ratio procedure was used to assess degree of stereotyping. This procedure uses 32 items selected from the BSRI as stimuli and asks subjects to estimate the percentage of people in the world and the percent of women who possess each of the traits. Each item is scored by taking the natural log of the likelihood ratio defined as percent of women/ percent of people who are thought to possess the trait. The final stereotypy index is the average of the log likelihood ratios. This procedure allows subjects a high degree of flexibility as to what traits they give prominence to in differentiating women as a target group, although these differences in prominence are not captured in the final numerical score.

The reliability of the total score on the GE has been examined and internal consistency was found to be .66 in a sample of 145 undergraduate volunteers (Richert & Hoyenga, 1986). Stability over time (4 weeks) was found to be .50 in a sample of 42 student volunteers (Richert & Hoyenga, 1989). Stability over time varied somewhat as a function of gender of respondent with

test retest correlations of .38 for males (N=12) and .54 for females (N=30) (Richert & Hoyenga, 1989). Given the factorial comnplexity of the scale (Cf. Table 1) these reliabilities are as expected.

Richert and Hoyenga (1986) also presented data showing that scores on CE were independent of both biological gender and self-ratings of items from either the BSRI or the Personal Attributes Questionnaire (Spence, Helmreich & Stapp, 1974). GE also showed a significant correlation with the semantic distances between the concepts "Woman and Doctor" ($r = .42$) and between the concepts "Woman and Teacher" ($r = .38$) rated on 15 semantic differential scales offering some additional support for the validity of the measure (Richert & Hoyenga, 1989). Further, in a study of 42 undergraduate volunteers (Richert & Hoyenga, 1990) GE scores were found to correlate .37 ($p < .05$) with self-esteem as measured by the Jackson Personality Inventory (Jackson, 1976) but to have no significant relation with social desirability ($r = .04$ as measured by the Marlowe-Crowne scale (Crowne & Marlowe, 1960).

Assessment of Cognitive Structure

Cognitive organization was assessed in two ways in this study. First, principal component factor analyses using a varimax rotation were done on the item likelihood ratio scores from the GE. Such a procedure provides information on the underlying dimensions used by persons achieving high and low scores on this measure.

Second, cluster analyses were performed on the Evaluation

(E), Potency (P) and Activity (A) scores dervied from a Semantic Differential (SD) based on 15 scales. Five scales were chosen to represent each of the 3 basic factors in the SD on the basis of having high factor loadings on those dimensions in Osgood Suci and Tannenbaum's (1957) data. The objects to be rated on these scales were chosen to represent three socially desirable male roles (Doctor, Engineer, Professor), three socially desirable female roles (Nurse, Secretary, Teacher), a socially undesirable role for males (Murderer), and one for females (Prostitute). In addition each role title was paired with the opposite gender (eg. Female Engineer, Male Nurse) and the concepts "Self", "Man" and "Woman" were included. The purpose in the selection of these concepts for rating was to provide a balance between male and female roles, desirable and undesirable roles for each gender and to examine how subjects would deal with concepts where gender and stereotypic gender of role were not consistent.

The cluster analyses performed to assess cognitive organization among the 19 concepts rated by the subjects was done on a similarity matrix obtained by intercorrelating E, P and A scores across the 19 concepts. An agglomerative procedure based on Euclidean distances (SPSS, 1986, pp. 777-788) was used. This procedure begins with each concept as its own "cluster" and iteratively forms clusters based on the smallest distances among centroids until all the concepts have been included in one cluster. Examination of the clusters at each stage of agglomeration offers information about what similarities are

perceived among concepts by the subjects and the order in which the similarities emerge. Such information can be understood as providing a view of the cognitive groupings used by the subjects in organizing the ratings of the concepts on each of the three dimensions. In other words, the procedure allows examination of the bases being used for clustering such as gender of role, gender of occupant of role, dimension of rating, or any other basis generated by the group of subjects under consideration.

Subjects

Subjects in this study were undergraduate volunteers recruited from both upper and lower division classes for a study in "Personal Estimations" from a local community college and a regional university. Subjects received class points for their participation. All testing was done in groups, and responses were anonymous.

The sample in the factor analytic study consisted of 471 subjects who had responded to the GE as part of various studies over the last 9 years. The sample contained 202 males and 269 females. Four groups were generated by crossing gender with total GE score classified as above or below the median for that gender. Broken down this way the sample contained 101 high stereotypy males (mean age 21.6) 101 low stereotypy males (mean age 21.3) 134 high stereotypy females (mean age 21.4) and 135 low stereotypy females (mean age 22.0). The range of ages in the total sample of 471 was from 17 to 50 years and was quite comparable in each of the four groups.

The sample in the cluster analysis study consisted of 32 males (mean age 22.5) and 53 females (mean age 24.4) who were also included in the factor analytic sample. The analyses were based on a median split of average log likelihood ratio stereotypy scores. The median stereotypy score for females was .210 and the median split resulted in a high stereotypy group containing 26 women with a mean age of 25.0 years and a low stereotypy group containing 27 women with a mean age of 23.8 years. The median stereotypy score for males was .195 and resulted in two groups of 16 men, the high stereotypy males having a mean age of 20.9 years and the low stereotypy males a mean age of 24.1 years.

Results

Analyses

Four factor analyses were performed on item log likelihood ratio scores, one for each of the four groups of subjects determined by crossing gender and median split stereotypy score. Principal components analyses were used, and both orthogonal and oblique rotations were attempted. However, neither type of rotation converged after 25 iterations.

As described above, the cluster analyses used an agglomerative procedure based on Euclidean distances from a similarity matrix based on intercorrelations among the E, P and A scores for each concept rated. The issue in interpreting the results of such a cluster analysis is to decide at what level of agglomeration to draw the contrasts among the four groups. Each

analysis required about 20 levels of agglomeration to include all 59 concepts in a single cluster. We dealt with this issue by identifying that level of clustering in each group at which differentiation on the basis of the gender of the role occupant was maximized. That is, we interpreted the organization for each group at that point where the clustering indicated maximal discrimiation between male and female role occupants or stimulus persons. That point was determined by using the ratio of the observed Chi-square for gender between clusters at that level to the value of Chi-square that was needed to achieve significance at the .05 level. The level of agglomeration at which that ratio was the largest was chosen as the level of clustering to interpret for that group. It must be made clear that there was no statistical test for significance of sex clustering here. The ratio was merely used as an index for selection purposes; to identify the level of clustering at which male and female role occupants were most differentiated.

Findings

Table 1 shows the GE items having loadings with an absolute value of .40 or greater on the first 7 unrotated factors for high and low stereotypy groups of males and females. The unrotated factor structure was used because both oblique and orthogonal rotations failed to converge after 25 iterations for all groups except low stereotypy males. Inspection of Table 1 shows that the factor structure based on the 32 GE items differs as a function of gender and level of stereotyping. Although across

groups factors 1 and 2 tend to contain items which suggest power or instrumental dimensions and factor 3 items which suggest an expressive dimension, there are interesting differences as well.

For high stereotypy males the items forming factor 1 suggest a dimension of individualistic power. Low stereotypy males place many of the same items onto factor 1 but add a series of items such as "Solemn", "Reliable", "Affectionate" and "Helpful" which negate the quality of individualism seen in this factor in high stereotypy males and adds expressiveness or social relatedness. Factor 1 combines desirable instrumental and expressive traits for high stereotypy females, creating an image of a strong, competent but feminine female. Low stereotypy females did not include many instrumental traits in factor 1.

For high stereotypy males factor 2 suggests a dimension of compliance with qualities such as likable, gentle, not self-reliant, not individualistic, not masculine and not aggressive being grouped together. Low stereotypy males, by contrast, generate a dimension of strength (self-reliant, not feminine and not tender) which is modified by the inclusion of the quality "not likable". It is interesting to note that the low stereotypy males create the dimension of strength by negating stereotypically feminine qualities (e.g. "Feminine", "Tender", and "Theatrical").

At first glance high stereotypy females appear to create a dimension of demureness for factor 2 by grouping items such as "Yielding", "Helpful", "Shy" and "Conscientious", but they

qualify that dimension by including dominant, not affectionate and not feminine on this factor. The overall impression of this factor is one of a dimension of coy or covert power. For low stereotypy females factor 2 is an inversion of what has been called unmitigated agency.

Across genders and levels of stereotypy factor 3 deals more with expressive/affiliative characteristics than with power/instrumentality. However, again there are interesting differences among the four groups. High stereotypy males generate a factor which might be termed "sisterliness" including items such as "Reliable", "Helpful", "Solemn", "Tender", "Shy" and "Yielding". Low stereotypy males produce a third factor which suggests warmth and affiliation. For high stereotypy females factor 3 focuses upon softness but with the qualification of unconventionality, while for low stereotypy females it centers upon concern for others. Factors 4 through 7 continue to show differences between the groups but could well reflect the potential unreliability of factors extracted later in the analysis and composed of fewer items.

The results of the cluster analyses are shown in Tables 2 through 5. High stereotypy males and low stereotypy females generate more clusters on the basis of gender than do low stereotypy males and high stereotypy females. The gender of the occupant of the role being rated becomes salient earlier in the agglomeration process for men who stereotype women and women who do not stereotype women suggesting that these groups make finer

distinctions using gender as a basis than do men who do not stereotype women and women who do. However, it is also important to note that four of the clusters generated by low stereotypy females deal with negative social roles and do not discriminate on the basis of gender of occupant of those roles. In fact, low stereotypy females produce only two clusters (Nos. 2 & 3) in which gender is a clear discriminating feature. Low stereotypy males produce only one such cluster (No. 1), while high stereotypy males produce 7 such clusters (Nos. 2, 3, 4, 5, 6, 7, 9 & 10) and Half of the clusters of high stereotypy females (two [Nos. 2 & 3] out of four) are based on the gender of the role occupants.

Examining the content of the clusters produced by each group suggests that for high stereotypy people, the dimension of potency may be particularly salient. High stereotypy males generate a series of clusters (Nos. 5, 6, 7, 10, 11 & 13) in which the primary basis of clustering appears to be potency and gender. These clusters clearly differ from one another on the basis of gender of role and/or occupant. High stereotypy females generate a male cluster and a female cluster on the basis of potency in which role is unimportant. Evaluation and activity scores are grouped by high stereotypy females into one large cluster which does not clearly discriminate between the genders. Low stereotypy subjects both male and female create clusters based on potency scores but these clusters do not discriminate between genders as is true for the high stereotypy subjects.

Cluster 3 for low stereotypy males and cluster 2 for low stereotypy females are clusters which group males who are in roles not stereotypically appropriate to their sex. These groups of subjects do not generate clusters of females in cross-sex roles. High stereotypy females create no clusters which capture cross-sex role occupancy. High stereotypy males, however, make more distinctions among people in cross sex roles than do the other three groups, generating very specific clusters which separate the people in cross sex role by biological gender (Nos. 3, 4, 10, & 11).

All subjects, regardless of level of stereotypy of women, generate clusters which group roles that are socially negative (Murderer and Prostitute). It is interesting to note that for all groups these clusters, though not identical, do not make distinctions among these socially undesirable roles on the basis of gender of occupant. It is also interesting to note that all groups link prostitutes and secretaries on the P and E dimensions.

Figure 1-1 presents the mean potency ratings for the four types of subjects for male and female role occupants (averaging over occupations) and masculine and feminine occupations (averaging over occupants). In terms of potency, high stereotypy males see more distinction between males and females than do low stereotypy males, and all males see male vs. female role occupants as being more different from each other than are people in masculine vs. feminine occupations. Females see the

occupation as being more important than the occupant.

Discussion

The data strongly suggest that individual differences in stereotyping of women are not simply a matter of degree of endorsement of a particular perception of women as a group. There are important differences in how information regarding gender of persons and roles is organized by persons high and low in degree of differentiation of women from the population. In other words, individual differences in stereotyping can be understood as qualitative differences in the cognitive organization of information about the sexes as well as quantitative differences in attribution of a particular quality to women. In our data, factors somewhat reminiscent of the instrumental and expressive dimensions which are typically seen in measures of sex-role stereotypy (Hoyenga & Hoyenga, 1979) emerge. However, the specific character of those broad dimensions appears to vary as a function of gender of respondent and level of stereotyping. For example, while all subjects generated a first factor that dealt with instrumentality, females and low stereotypy males generate a dimension in which gentleness and compassion are combined with strength or dominance. This quality is absent from the factor generated by high stereotypy males. Similarly, factor three deals with more expressive characteristics across groups. However, each group has a particular quality to the dimension they define, with high stereotypy males defining a dimension of sisterliness, low

stereotypy males one of attractiveness, high stereotypy females one of unconventional softness and low stereotypy females one of concern for others.

This type of qualitative difference between levels of stereotyping is evident not only in the factor analyses but in the cluster analyses as well. These analyses suggest that high stereotypy males make more discriminations on the basis of gender information than do low stereotypy males or females. High stereotypy subjects of both sexes created sets of clusters, which might be thought of as representing cognitive categories, which tended to be exclusively male or female, and to have pairs of such clusters--one for males and one for females. These clusters tended to be created on the dimension of potency as defined in the Semantic Differential (Osgood, et al., 1957). Low stereotypy subjects also formed some categories on the basis of gender, but did not show the paired categories (ie., one for males and one for females) that were seen in the cluster structure for high stereotypy subjects. Such an organization in terms of contrasting groups for males and females in high stereotypy subjects would certainly be consistent with the rationale underlying the GE scale which defines stereotypy in terms of differentiation of women from the population as a whole.

Clearly if, as Polkinghorne (1983; 1988) has argued, context is critical in understanding human communication and therefore human thinking, then the inclusion of varying qualifiers on a common factor by different groups is to be taken seriously. It

suggests that the meaning of the dimension is not the same for each of the groups. Certainly thinking in terms of a dimension of imperial power is not the same as thinking in terms of a dimension of gentle/helpful power. Nor is organizing gender related information in terms of potency contrasts the same as creating categories which group women who are behaving in non-stereotypic ways. However, these distinctions are clearly qualitative rather than quantitative. They are also quite likely to have a major impact differences in how people who organize gender relevant information in one way as opposed to another are likely to behave toward women, simply because the meaning of the term "woman" is not the same for them.

Because of the relatively small sample sizes used in the factor analyses, the potential for instability in the factors derived from our data is considerable. For this reason the exact content of the factors must be viewed with caution. Similary, addition of subjects might well change the specific content of the clusters in each of the four groups. However, considering that differences among the four groups were apparent even in the very late stages of agglomeration (high level clusters) in the present data, it seems unlikely that high and low stereotypy subjects would be seen to organize information regarding gender in the same way in a larger sample. In short, given further data, it is quite likely that some of the specific characteristics of cognitive organization differentiating high and low stereotypy subjects might change. Indeed, it is

consistent with the position being taken here that each person will have an idiosyncratic organization of information concerning women which can be thought of as his/her unique "stereotype" of women. However, the present data suggest that to understand stereotyping it will be useful to consider that degree of stereotyping entails qualitative differences in the organization of information and, more tentatively, that the tendency to draw contrasts between the genders and to give greater centrality to a dimension of potency in organizing information may be characteristic of high rather than low stereotypy individuals.

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Table 1 First seven factors by gender and level of stereotype

	High Males 49.6% (N = 101)	Low Males 49.0% (N = 101)	High Females 49.4% (N = 134)	Low Females 45.6% (N = 135)
Factor 1	Loyal .49 Masculine .45 Tactful .43 Inefficient -.43 Individualistic .43 Leadership .41 Dominant .41 Athletic .46 Conceited .40	Reliable .61 Leadership .60 Loyal .56 Dominant .53 Solemn .52 Self-sufficient .50 Conceited .48 Affectionate .48 Tactful .48 Helpful .45 Self-reliant .40 Individualistic .47	Reliable .54 Self-reliant .51 Gentle .50 Yielding .48 Forceful .42 Truthful .41 Leadership .44 Self-sufficient .40 Theatrical .40 Helpful .41 Solemn .40 Tactful .42 Compassionate .51	Leadership .68 Reliable .60 Self-sufficient .56 Conscientious .51 Truthful .47 Tactful .44 Self-reliant .43 Yielding .40 Helpful .46
Factor 2	Masculine -.40 Aggressive -.52 Likable .48 Individualistic -.45 Gentle .45 Self-reliant -.43	Feminine -.43 Tender -.40 Theatrical -.40 Self-reliant .40 Likable -.40	Yielding .40 Helpful .50 Feminine -.70 Shy .60 Conscientious .44 Affectionate -.40 Dominant -.40	Gentle .59 Aggressive -.57 Secretive -.51 Dominant -.43
Factor 3	Yielding -.50 Solemn .50 Shy -.47 Reliable .44 Tender .43 Leadership .42 Theatrical .40 Helpful -.40	Affectionate .46 Tender .40 Gentle .64 No harsh language .49 Likable .40 Loves children -.49	Gentle .41 Tender .54 Cheerful .46 Conventional -.43	Compassionate .54 Helpful .50 Cheerful .43
Factor 4	Self-reliant .66 Affectionate .50	Dominant -.42 Loves children .52 Aggressive .40 Feminine .41	Leadership .42 Secretive -.47 Individualistic .47	Masculine .63
Factor 5	Tactful .42 Secretive .55 Feminine .44	Compassionate .48 Individualistic .48	Aggressive .60 Inefficient .46 Solemn -.43	Truthful -.41 Likable -.49 Loyal .43 Forceful .45
Factor 6	Loyal -.42 Forceful -.40 Theatrical -.45 Helpful -.41	Forceful -.47	No harsh language -.58 Likable .49 Loves children .45	Inefficient -.49 Shy .44 Solemn .40
Factor 7	Dominant -.53	No harsh language .40 Masculine -.58 Inefficient .62	Loves children -.42 Tactful -.53 Compassionate .52	Shy .41

Notes: Factor loadings are shown following items
Percentages in column headings are amounts of variance accounted for by first seven factors
Numbers following items are factor loadings

Table 2 Clusters for high males

Cluster 1

	E	P	A
M	Secretary Engineer Doctor Professor Teacher Nurse 1.03	Murderer	
F	Secretary Teacher Doctor Woman Engineer Nurse Professor 1.42		Nurse Doctor

Cluster 2

	E	P	A
M			
F		Teacher Woman -0.42	Secretary Engineer Woman 0.46

Cluster 3 Hi Males

	E	P	A
M		Nurse Secretary -0.65	Nurse Secretary 0.63
F			

Cluster 4

	E	P	A
M			
F			Murderer Professor 0.4

Cluster 5

	E	P	A
M	Man 0.81	Engineer Professor Teacher Doctor 0.91	Engineer Teacher 0.76
F			

Cluster 6

	E	P	A
M			
F		Professor -0.07	

Table 2--Continued

Cluster 7

	E	P	A
M		Self Professor 0.98	Self 1.05
F			

Cluster 8

	E	P	A
M		Man 1.37	Murderer 0.49
F			Prostitute Teacher 0.53

Cluster 9

	E	P	A
M			Man 0.85
F			

Cluster 10

	E	P	A
M			Doctor 0.95
F		Nurse Engineer Doctor -0.01	

Cluster 11

	E	P	A
M	Self 1.74		
F		Murderer Prostitute -0.21	

Cluster 12

	E	P	A
M	Prostitute Murderer -1.71		Prostitute 0.06
F	Prostitute Murderer -1.29		

Table 2--Concluded

Cluster 13

	E	P	A
M		Prostitute -0.42	
F		Secretary -1.04	

Table 3 Clusters for low males

Cluster 1

	E	P	A
M			
F	Prostitute -0.89	Doctor Professor Teacher Woman Nurse Secretary -0.11	Secretary Woman 0.34

Cluster 2

	E	P	A
M	Man Woman Engineer Teacher Secretary Nurse Self Doctor Professor 0.96	Man Murderer Teacher Prostitute Doctor Professor Engineer Self 0.66	Nurse Secretary Doctor Teacher Self Professor 0.65
F	Engineer Nurse Secretary Professor Doctor Teacher 0.92	Murderer Engineer Prostitute -0.05	Professor Doctor Nurse Murderer Teacher 0.47

Cluster 3

	E	P	A
M		Nurse Secretary -0.05	
F			Prostitute 0.21

Cluster 4

	E	P	A
M	Murderer Prostitute -1.23		Engineer Prostitute Man Murderer 0.33
F	Murderer Engineer -0.38		

Table 4 Clusters for high females

Cluster 1

	E	P	A
M	Professor Teacher Nurse Secretary Doctor 1.17		Professor Nurse Secretary Prostitute Doctor Teacher 0.81
F	Professor Engineer Nurse Doctor Teacher Self 1.55		Teacher Woman Secretary Murderer Doctor Engineer Nurse Self Professor 0.71

Cluster 2

	E	P	A
M		Murderer Engineer Man Teacher Doctor Professor 0.94	Man Murderer Engineer 0.83
F	Woman 1.83	Secretary -0.64	Prostitute -0.17

Cluster 3

	E	P	A
M	Engineer 0.81		
F		Engineer Prostitute Nurse Doctor Professor Self Teacher Secretary Woman 0.13	

Cluster 4

	E	P	A
M	Prostitute Man Murderer -1.05	Nurse Secretary Prostitute -0.06	
F	Prostitute Murderer -1.68		

Table 5 Clusters for low females

Cluster 1

	E	P	A
M	Nurse Teacher Engineer Doctor Professor Man 1	Professor Doctor Man 0.87	Nurse Teacher Professor Engineer Doctor 0.73
F	Engineer Doctor Professor Woman Secretary Teacher Nurse 1.27	Self 0.18	Professor Doctor Engineer Woman Secretary Teacher Nurse 0.63

Cluster 2

	E	P	A
M	Secretary 0.85	Secretary Prostitute -0.23	Secretary Prostitute 0.38
F	Self 1.76		

Cluster 3

	E	P	A
M		Teacher Engineer Nurse 0.71	
F		Teacher Nurse Doctor Engineer Professor Woman Secretary -0.1	Self

Cluster 4

	E	P	A
M		Murderer 0.85	Man 0.88
F		Murderer	0.47

Cluster 5

	E	P	A
M			Murderer 0.12
F			Murderer 0.12

Cluster 6

	E	P	A
M	Prostitute -1.62		
F	Prostitute Murderer -1.44	Prostitute -0.42	

Table 4--Concluded

Cluster 7

	E	P	A
M			
F			Prostitute 0.27